

# Abstract

A digital laser beam source and an operating method thereof is provided for a directional and graphical infrared countermeasures system for defensively countering guided missiles having infrared FPA based seeking heads, by directing and mapping an vector infrared laser dot photographic thermal image at the guided missile andIRST w HSS (Infrared Search and Track with helmet sight system).so as to disorient, confuse and deceive FPA IR detectors and thermal image identify unit in the target tracking and seeking head. The power, pulse frequency and fire timing of the laser beam is controllable; the scanning system is with high mapping rate, as required to adapt to any particular defensive engagement. To achieve this, the laser beam source with wavelength of 3-5 and 8-12 micron meter comprises an Nd :YAG pumping laser, a 3 axis galvanometer based optical scanner, gimbaled servo platform and digital thermal image process computer including an vector multi-wavelength IR thermal image database and digital image processing software. Fig. 1.